

**COMMONWEALTH OF VIRGINIA**  
**Department of Environmental Quality**  
**Northern Virginia Regional Office**  
**STATEMENT OF LEGAL AND FACTUAL BASIS**

ExxonMobil Refining and Supply Company  
8200 Terminal Road, Fairfax, Virginia  
Permit No. NVRO-70087

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, ExxonMobil has applied for a Title V Operating Permit for its Newington Terminal, Newington, Virginia facility. The Department has reviewed the application and has prepared a draft/proposed Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_ Date: \_\_\_\_\_

Air Permit Manager: \_\_\_\_\_ Date: \_\_\_\_\_

Regional Permit Manager: \_\_\_\_\_ Date: \_\_\_\_\_

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## **FACILITY INFORMATION**

### **Permittee:**

Exxon Mobil Corporation  
3225 Gallows Road  
Fairfax, Virginia 22037

### **Facility:**

ExxonMobil Refining and Supply Company  
8200 Terminal Road  
Newington, Virginia 22122

**AIRS ID No.** 51-059-0034

## **SOURCE DESCRIPTION**

SIC Code: 5171

The facility is a petroleum liquids storage and distribution facility. The terminal structures and equipment include seven vertical fixed roof tanks for gasoline. They are equipped with internal floating roofs with primary and secondary seals. There are eight distillate product storage tanks, three additive tanks, six underground tanks, one oil/water separator holding tank and four small tanks. The gasoline storage tanks are sources of volatile organic compound emissions. The remaining tanks are insignificant emission units.

The facility has eight loading bays. Bays one, two, and three load various grades of gasoline. Bay four loads either gasoline or distillates. Bay five has been deactivated. Bay six is a distillate-only lane; and bays seven and eight are refueling and service lanes.

Products are received primarily by pipeline, but they may be received by tanker trucks as well. Products are also shipped by pipeline.

There is one vapor control unit associated with the loading rack. This unit is a dual bed carbon adsorber/absorber vapor recovery unit (VRU). This unit may be activated either manually or automatically. During extended periods of maintenance or malfunction of the VRU, a portable vapor combustion unit (VCU) may be employed to minimize emissions in accordance with 9 VAC 5-50-20. However, although a portable VCU is occasionally stationed at this facility, a VCU is not dedicated for exclusive use at the terminal nor is one used on a regular basis. A portable VCU is available for use on an as-needed basis during extended periods of malfunction of an emission control unit.

There are buildings that house offices, maintenance facilities, and a garage building. The facility is subject to 40 CFR 63, General Provisions and Subpart R, 40 CFR 60, General Provisions and Subparts Kb, incorporated by reference, Subpart XX, and 9 VAC 5-40-5200 (Rule 4-37).

## COMPLIANCE STATUS

The facility is inspected twice a year.

The source has been and continues to be in compliance with 9 VAC 5-40 Article 37 and 40 CFR 60, Subpart XX. After the issuance of this permit it will be inspected for compliance with 40 CFR 63, Subpart R, and applicable portions of 40 CFR 60, Subpart Kb.

## EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The significant emissions units at this facility consist of the following:

Tank ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Description (PCD)	PCD ID	Pollutant Controlled
A1	Storage Tank	2,774,221 gal	Internal Floating Roof	-	Gasoline - VOC
A2	Storage Tank	2,544,221 gal	Internal Floating Roof	-	Gasoline - VOC
A3	Storage Tank	1,807,500 gal	Internal Floating Roof	-	Gasoline - VOC
A4	Storage Tank	4,069,998 gal	Internal Floating Roof	-	Gasoline - VOC
A5	Storage Tank	2,847,591 gal	Internal Floating Roof	-	Gasoline - VOC
A6	Storage Tank	2,839,882 gal	Internal Floating Roof	-	Gasoline - VOC
A17	Storage Tank	1,744,302	Internal Floating Roof	-	Gasoline - VOC
LR/VRU	Loading Rack/ Vapor Recovery Unit	144,000 gal/hr	Vapor Recovery	John Zink Vapor Recover Unit	Gasoline - VOC

## EMISSIONS INVENTORY

Significant emissions from this source are volatile organic compounds (VOC). Emissions are summarized as follows:

Total VOC emissions for 2000 (all sources) was 73.8 tons. HAP emissions were included in this total. The primary HAP emitted from this source is methyl tertiary butyl ether (MTBE).

## **EMISSION UNIT APPLICABLE REQUIREMENTS**

### **Limitations**

A permit was issued June 9, 1978 to construct a cone roof 120,000 barrel (5,040,000 gallons) jet kerosene storage (later designated as T-7), tank and to modify an existing 43,000 barrel (1,806,000 gallons) tank (T-3) by installing an internal floating pan (roof). This permit, issued in 1978, is the only air emissions permit issued to this facility and it is a State only permit.

The following limitations are SIP requirements under Rule 4-37 and 40 CFR 60 Subpart XX:

### ***Emissions Unit - Tanks***

Emissions to the atmosphere from the fixed roof gasoline tanks are controlled by internal floating roofs resting on the surface of the liquid contents and equipped with closure seals to close the space between the floating roof edge and the tank shell. Tanks storing volatile organic compounds (VOC) achieve a minimum of 90% reduction by weight in emissions. The storage of petroleum products with a true vapor pressure greater than or equal to 1.5 psia achieved this reduction by installation of internal floating roofs equipped with closure seals. (9 VAC 5-40-5200.C)

Fixed roof tanks storing petroleum liquids with a vapor pressure less than 1.5 pounds per square inch absolute (psia) under actual storage conditions or, in the case of filling or processing, under actual filling conditions are exempt from Rule 4-37 and 9 VAC 5-40-5200. C.

All gasoline storage tanks located at this facility conform with the above requirements. These requirements are specified in 9 VAC 5-40-5230. A.1.a. and 9 VAC 5-40-5230. B 4. 4. Tanks so equipped may store either gasoline or distillates.

### ***Emission Unit - Loading Rack and Vapor Control Unit***

The monitoring device required of Subpart R has been in place and operational since September 2000. (9 VAC 5-80-100.A)

The loading rack is equipped for bottom loading - all bays.  
(9 VAC 5-40-5230. D. 2. a)

### ***40 CFR 63, Subpart R Requirements***

This facility has requested operational requirements of 40 CFR 63, Subpart R. This includes specific emission limits, ten mg/l maximum emissions from the VRU/VCU, monitoring parameters, recordkeeping and reporting requirements. It also required operation of the gasoline storage tanks according to 40 CFR 60, Subpart Kb, § 60.112b(a)(1) through (4) except for the requirements in §§60.112b(a)(1)(iv) through (ix) and 60.112b(a)(2)(ii) and operation of the loading rack according to 40 CFR 60, Subpart XX with certain additional requirements from

40 CFR 63, Subpart R. Operation is based on the most stringent segment of each of the above requirements.

Vapor tightness of the loading rack and VRU must be verified by monthly inspections during the loading of tanker trucks. Sight, sound, and smell are acceptable means for the determinations. Findings must be recorded in a log book and the record must, therefore, be retained on site for review by appropriate inspectors. Leaks must be repaired within fifteen days. This condition is found at Part IV. Condition B.4.

Fugitive emissions from the loading rack may be quantified. These emissions (TOC) have been calculated from AP-42 data as thirteen mg/l, loaded. However, data from the CTG indicate that the emissions are more nearly eight mg/l. The eight mg/l factor is used in the permit both for establishing an emission inventory and for fee purposes. This requirement appears in the Title V permit at Part IV. Condition A.(2).

#### ***Emission Unit - Cold Cleaner***

These are small units. Only non-halogenated solvents are used for metal parts degreasing. While they emit essentially insignificant quantities of air pollutants these units are subject to 9 VAC 5-40-3260 because of their location in a volatile organic compound emission control area as designated in 9 VAC 5-20-206.

#### ***Emission Unit - Facility Wide***

It is recognized that the primary emissions from this source are volatile organic compounds. There are HAP emissions that are counted in the total VOC emissions. These emissions are listed above in the Emission Inventory section.

Limitations are placed on opacity and fugitive dust emissions Part VII. A. 1 and 2.

#### **Monitoring**

Monitoring of tanks is found in the Title V permit at Part III. C. 3. The emissions are estimated by the current revision of the EPA TANKS model or AP-42.

Monitoring is required for total organic compound (TOC) emissions from the VCU as described in Part IV.B.1 and 2. The baseline for this is established during the certification test.

Additionally the Loading Rack and VRU are monitored by inspection for vapor/liquid leaks each calendar month at Condition Part IV.B.4.

The monthly site inspection of all pumps, fittings, etc., at Part VI Condition B.4, assures that fugitive emissions will be minimized.

Monitoring for opacity has not been addressed before simply because the VOCs emitted are not the types that normally lend themselves to the generation of opacity. There is, however a slight potential for opacity to occur at the facility.

Fugitive dust is not a significant issue because the traffic surfaces of this facility are essentially composed of asphalt and concrete. These surfaces do not as a rule produce airborne fugitive dust. There is one gravel service road around the storage tanks that is regularly used for maintenance and inspections and it is regularly maintained. Good work practices for the facility are reflected in periodic wash-down operations to remove trace amounts of fuel lost during the fueling of tanker trucks. This removes the dirt, etc., brought to the site by the tanker trucks. While the requirements of 9 VAC 5-40-5250 and 9 VAC 5-50-90 are applicable, the generation of measurable fugitive dust emissions is not likely.

### Testing

When testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods as applicable in accordance with procedures approved by the DEQ as follows:

Pollutant	40 CFR 60, Appendix A
VOC	EPA Methods 18, 25, 25a, 25b
VOC	EPA Methods 24, 24a
NO <sub>x</sub>	EPA Method 7 or 7E
SO <sub>2</sub>	EPA Method 6 or 6C
CO	EPA Method 10
PM/PM <sub>10</sub>	EPA Methods 5, 17
Visible Emission	EPA Method 9

(40 CFR 60.502 (e)(3-5); 60.502 (f-i); 60.505 (a), 9 VAC 5-20-121. A. 2, and 9 VAC 5-80-110.B.1)

The permit does require certification testing. An alternative procedure of monitoring with annual certification of the monitoring sensors is allowed. A table of test methods has been included in the permit when testing is performed. The DEQ and EPA have authority to require testing not included in this permit at any time, if necessary to determine compliance with an emission limit or standard.

### Recordkeeping and Reporting

All records of monitoring maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

- (1) The date, place as defined in the permit and the time of sampling or measurements.
- (2) The dates analyses were performed.

- (3) The company or entity that performed the analyses.
- (4) The analytical methods used.
- (5) Results of such analyses.
- (6) Operating conditions existing at the time of sampling or measurement.
- (9 VAC 5-80-110 F)

Records of all monitoring data and supporting information shall be retained for at least five years (9 VAC 5-80-110.F.1.b) from the date the information was obtained unless a lesser date is indicated. Support information includes all calibration and maintenance records and all other data including any modeling required. These data shall also include any deviations from permit requirements. The term "deviation" includes any exceedence of permit condition or any excursion from control performance indicator documented through periodic or compliance assurance monitoring. These are listed in Condition VII.D. Results of these data contained in any applicable requirement shall be submitted to the Air Compliance Manager, Northern Virginia Regional Office with a copy to:

Chief, Air Enforcement Branch (3AT20)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

Results shall be submitted no later than March 1 and September 1 of each calendar year. The report must be signed by a responsible official consistent with 9 VAC 5-80-80 G, and shall include:

- (1) The time period covered by the report - the time periods to be addressed are January 1 to June 30 and July 1 to December 31 (9 VAC 5-80-110 F).
- (2) The permit also requires periodic inspections of the internal floating roof, the associated seals and the recordkeeping and reporting for the inspections. By this permit and the existing State permit all internal floating roof tanks are required to be inspected and recordkeeping and reporting are the same for all tanks which store gasoline. The tanks are also subject to 9 VAC 5-40-5200. Under the present operational mode tanks storing product with vapor pressures less than 1.5 psi are exempt from regulation.
- (4) The Subpart R also requires tanker truck certification for vapor tightness that is addressed at Part VI of the Title V permit.

Records must be maintained of all emissions data and operating parameters necessary to demonstrate compliance with this permit. This is found at Part VII. D.

All records must be kept for the life of the permit (five years). (9 VAC 5-80-110.F.1.b)

A record of the dimensions and capacity of each tank that is greater than 19,815 gallons must be kept on site for the life of the tank. This requirement is stated in 40 CFR 60 .116b(b).

### GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all federal operating permit sources. These include requirements for submitting semiannual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset, within one business day.

Tanker truck Identification:

This identification shall be performed either manually or electronically.

### STATE ONLY APPLICABLE REQUIREMENTS

There is one outstanding permit in force. It has as a part of the requirements a condition that by itself would require a state permit. The installation of an internal floating roof in a storage tank as a control device is not a permissible action, but the reason for this modification is to allow storage of gasoline. When content of a large storage tank is changed from a low vapor pressure liquid (1.5 psia or lower), such as distillate oil, to a high vapor pressure liquid (greater than 1.5 psia), such as gasoline, this brings about an increase in emissions from that tank. This action requires a state permit.

The rule concerning the emissions of objectionable odors (9 VAC 5-40-140) is a state-only applicable requirement.

### FUTURE APPLICABLE REQUIREMENTS

There are no known future applicable requirements.

### INAPPLICABLE REQUIREMENTS

Citation	Title of Citation	Description of applicability
9 VAC 5-40-3410 through 3550	Emission Standards for VOC Storage and Transfer Operations	Since the provisions under petroleum liquids storage or transfer apply, and support tanks are less than 40,000 gallons capacity Article 25 does not apply (9 VAC 5-40-3410. C)
40 CFR 60 Subparts K & Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which construction, Reconstruction or Modification	The storage tanks are either grandfathered (construction prior to June 23, 1973) or are unregulated according to:



Citation	Title of Citation	Description of applicability
	Commenced: After June 11, 1973, and prior to May 19, 1978(K) After May 18, 1978, and prior to July 23, 1984(Ka)	9 VAC 5-40-5200. C and 9 VAC 5-40-5220.A.3
40 CFR 68	Accidental Release Prevention Requirements: Section 112 (r)	Petroleum Liquids (gasoline, diesel fuel, jet fuel, etc.) Are not subject to this rule

## COMPLIANCE PLAN

There is no requirement for a compliance plan at this facility.

## INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C) (gallons)
A7	Vert. Fixed Roof Distillate Tank	9 VAC 5-40 5200. C	VOC	5,145,266
A11	Vert. Fixed Roof Distillate Tank	9 VAC 5-80-720.B.2	VOC	574,347
A12	Vert. Fixed Roof Distillate Tank	9 VAC 5-80-720.B.2	VOC	574,594
A14	Vert. Fixed Roof Distillate Tank	9 VAC 5-80-720.B.2	VOC	1,391,104
A15	Vert. Fixed Roof Distillate Tank	9 VAC 5-40-5200. C	VOC	1,391,298
A16	Vert. Fixed Roof Distillate Tank	9 VAC 5-40-5200. C	VOC	2,848,907
A18	Vert. Fixed Roof Distillate Tank	9 VAC 5-40-5200. C	VOC	1,822.396
A19	Vert. Fixed Roof Distillate Tank	9 VAC 5-40-5200. C	VOC	3,452,322
A23	Vert. Fixed Roof Additive Tank	9 VAC 5-40-5200. C	VOC	19,545
A24	Vert. Fixed Roof Additive Tank	9 VAC 5-40-5200. C	VOC	9,544
A25	Vert. Fixed Roof Separator holding	9 VAC 5-40-5220. A	VOC	10,000
A27	Horizontal Distillate Tank	9 VAC 5-40-5200. C	VOC	500
A28	Horizontal Slop Tank	9 VAC 5-40-5220. A	VOC	200

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C) (gallons)
A29	Horizontal Slop Tank	9 VAC 5-40-5220. A	VOC	200
A30	Horizontal Condensate Tank	9 VAC 5-40-5200. C	VOC	3,000
A31	Tosco Additive	9 VAC 5-40-5200. C	VOC	650
B01	L/R Flush Drain (underground)	9 VAC 5-40-5200. C	VOC	4,000
B02	VRU Knock Out (underground)	9 VAC 5-40-5200. C	VOC	1,000
B03	CWDO (water) (underground)	9 VAC 5-40-5200. C	VOC	8,000
B04	Slop Oil Tank (underground)	9 VAC 5-40-5200. C	VOC	1,000
B05	Heating Oil (underground)	9 VAC 5-40-5200. C	VOC	4,000
B06	Heating Oil (underground)	9 VAC 5-40-5200. C	VOC	1,000

Additionally, there are insignificant emissions from small comfort heating units.  
(9 VAC 5-80-720. A and C)

#### **CONFIDENTIAL INFORMATION**

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

#### **PUBLIC PARTICIPATION**

The proposed permit will be placed on public notice in the Washington Times on June 16, 2001.